BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF DELAWARE

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| IN THE MATTER OF THE APPLICATION OF<br>DELMARVA POWER & LIGHT COMPANY FOR<br>AN INCREASE IN ELECTRIC BASE RATES<br>AND MISCELLANEOUS TARIFF CHANGES<br>(FILED DECEMBER 2, 2011) | )<br>)<br>)<br>)<br>) | PSC DOCKET NO. 11-528 |

# DIRECT TESTIMONY OF

# KARL PAVLOVIC, Ph.D

ON BEHALF OF

COMMISSION STAFF

May 15, 2012

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## I. INTRODUCTION

**Q. PLEASE STATE YOUR FULL NAME, ADDRESS, AND OCCUPATION.**

A. My name is Karl Richard Pavlovic. My business address is 8100 Professional Place, Suite 306, Hyattsville, MD 20785. I am a Senior Consultant with Snavely King Majoros & O'Connor, Inc. ("Snavely King"), an economic consulting firm that represents the interests of government agencies, businesses and individuals who are consumers of telecom, public utility and transportation services. A summary of my educational background, research, and related business experience is provided in Appendix A. Appendix B contains a list of the regulatory projects and proceedings in which I have participated and/or made an appearance.

**Q. FOR WHOM ARE YOU APPEARING?**

A. I am testifying on behalf of the Staff of the Delaware Public Service Commission ("Staff").

**Q. WERE YOUR TESTIMONY AND EXHIBITS PREPARED BY YOU OR UNDER YOUR DIRECT SUPERVISION AND CONTROL?**

A. Yes, they were.

**Q. HAVE YOU PREVIOUSLY APPEARED BEFORE THIS COMMISSION?**

A. No.

**Q. HAVE YOU PREVIOUSLY TESTIFIED IN REGULATORY PROCEEDINGS?**

A. Yes. I have submitted testimony to the Federal Communications Commission, the Federal Energy Regulatory Commission, the Alaska Public Utilities Commission, the Corporation Commission of the State of Kansas, and the Public Service Commission of the District of Columbia.

**Q. PLEASE SUMMARIZE YOUR QUALIFICATIONS?**

A. I received undergraduate and graduate degrees in Philosophy from Yale College and Purdue University. By education and professional experience I have expertise in formal and mathematical logic, statistics, economics, financial analysis, econometrics, and computer modeling. I have gained knowledge in the areas of commercial and industrial operations in the energy, transportation, and telecommunications industries and familiar with a wide range of experimental and investigative methods in science and engineering. For over 25 years I have served as a consultant on the economics of regulated industries to clients in the public and private sectors. In that capacity I have been responsible for the design and execution of statistical, economic and financial analyses of discrete commercial operations, individual firms, and industry sectors for use by management and counsel in formulating and implementing commercial and litigation strategy. In a number of cases, these analyses have been the basis for testimony by me or others in regulatory and court proceedings. My consulting assignments in the energy field have included analyses of crude oil and petroleum product markets, the operations and costs of petroleum pipelines, investigations of the operating and plant investment costs and

least cost planning of electric and natural gas systems, and all aspects of the restructuring of electric markets.

**Q. PLEASE SUMMARIZE YOUR ELECTRIC REGULATORY EXPERIENCE.**

My electric regulatory experience has been primarily before the Public Service Commission of the District of Columbia with regard to the Potomac Electric Power Company (Pepco). I have testified in numerous cases regarding (a) planning reserve margin, (b) "lost revenues" attributable to Demand-Side Management ("DSM") programs, (c) weather emergency response, (d) operational and financial issues with regard to Pepco's divestiture of its generating assets, the subsequent unbundling of its retail rates, (e) performance of renewable and energy efficiency programs, (f) the performance of Pepco's transmission and distribution facilities, (g) the cost and benefits of the Pepco-Conectiv merger, (h) the procurement of Standard Offer Service ("SOS") electric supply and retail SOS rates, (i) the need for new transmission lines to serve load, and (j) issues of cost allocation, revenue requirement distribution, and rate design. I also served for a number of years as the technical representative of the Office of the People's Counsel of the District of Columbia to Pepco's Productivity Improvement Working Group and on various member working groups within PJM.

## II. <u>SCOPE OF TESTIMONY</u>

**Q. WHAT IS THE SCOPE OF YOUR TESTIMONY IN THIS PROCEEDING?**

A. I have been asked by PSC Staff to examine Delmarva's assertions and proposals in this proceeding regarding jurisdictional and class distribution costs, rate design, regulatory lag, and alternative regulation mechanisms.

**Q. HAVE YOU PREPARED ANY EXHIBITS IN SUPPORT OF YOUR RECOMMENDATIONS?**

A. Yes. I have included seven exhibits:

Exhibit KRP-1: VonSteuben Schedules WMV-17 and WMV-18

Exhibit KRP-2: Gausman Direct Testimony Tables 3 and 4

Exhibit KRP-3: "How Should Regulators View Cost Trackers?" National Regulatory Research Institute, September 2009

Exhibit KRP-4: Recent Capex Recovery Mechanism Precedents for US Energy Utilities

Exhibit KRP-5: Santacecilia Schedule MCS-5

Exhibit KRP-6: Gausman Direct Testimony Table 7

Exhibit KRP-7: Comparison: Rim Project Budget to Total distribution Budget – 2012-2016

Exhibit KRP-8: Analysis of Delmarva Distribution Construction Budget – 2012-2016

Exhibit KRP-9: 12+0 Update Schedules WMV S-1 and WMV S-2 and Workpapers COS #1 through COS #12

Exhibit KRP-10: Schedules EPT-1 through EPT-2

Exhibit KRP-11: Schedules MCS-1 through 4

**Q. HOW IS YOUR TESTIMONY ORGANIZED?**

A. My testimony is organized into four sections. In the first section, I address Delmarva witness VonSteuben's assertion that Delmarva suffers from regulatory lag in the form of chronic under earning in its Delaware distribution operations. Secondly, I address the Reliability Investment Recovery Mechanism (RIM) as proposed by Delmarva witnesses

Lowry, Gausman and Santacecilia as the solution to Delmarva's under earning. Third, I address Delmarva's jurisdictional cost allocation procedures, Delmarva witness VonSteuben, and its class cost allocation procedures, Delmarva witness Tanos. Finally, I address the rate design proposals of Delmarva witness Santacecilia.

## III. SUMMARY OF TESTIMONY

**Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

A. Delmarva has not demonstrated that it suffers from chronic attrition or under earning. Delmarva has not demonstrated that its recent under earning is caused by capital expenditures for reliability, nor that it will experience under earning in the future due to reliability capital expenditures.

Delmarva has not presented its RIM proposal in sufficient detail for the Commission and parties to consider it on its merits. In addition to lacking in detail, Delmarva's RIM proposal is fatally flawed because it does not demonstrate: (1) that there is a need for the RIM; (2) that the RIM will accomplish the stated goals of avoiding or minimizing under earning and improving reliability; and (3) that the RIM will provide a benefit to ratepayers.

Delmarva's jurisdictional study properly develops its Delaware jurisdictional distribution costs.

Delmarva's failure to develop separate allocators for underground and overhead facilities: (1) renders the study's class rates of return suspect, likely understates the rate of return for the residential class and overstates the revenue requirement allocated to the residential class: and (2) renders the calculation of full class customer costs suspect as well. The class cost study should be used to be used either to distribute the revenue

requirement among the classes or to establish the class customer charges.

Delmarva's proposed rate structure design is inappropriate due to the inclusion of volumetric rate components, but should be accepted pending final design, adoption and implementation of the Modified Fixed Variable Rate Design.

My recommendations are:

- The Commission should reject Delmarva's assertion that it is suffering from chronic attrition.
- The Commission should reject Delmarva's RIM proposal as insufficient.
- The Commission should accept Delmarva's jurisdictional study.
- The Commission should reject Delmarva's class cost of service study as the basis for revenue requirement distribution and direct Delmarva to use the current revenue distribution.
- The Commission should reject Delmarva's proposal to move to full cost recovery of the class customer costs and maintain the current relationship between class customer revenue requirement and class volumetric or demand revenue requirement.
- The Commission should accept Delmarva's rate structure design pending implementation of the Modified Fixed Variable Rate Design.

## IV. DISCUSSION

### REGULATORY LAG

**Q. IS REGULATORY LAG IN THE FORM OF UNDER EARNING A PROBLEM THAT THE COMMISSION NEEDS TO ADDRESS?**

A. The traditional regulatory model applied to electric utilities represents a balancing of interests and incentives between the utility and its ratepayers. In that model, under earning is an important incentive for an electric utility to improve the efficiency and productivity of its operation. Under earning is a potential problem only if it becomes chronic, and in that case it should be addressed -- in the first instance -- by the management of the utility.

**Q. DELMARVA WITNESS VONSTEUBEN TESTIFES THAT DELMARVA SUFFERS FROM CHRONIC UNDER EARNING. DOES DELMARVA SUFFER FROM CHRONIC UNDER EARNING?**

A. No. In Table I of his testimony, Mr. Von Steuben compares Delmarva's earned return on equity (ROE) to its Commission authorized ROE for the years 2006 through 2010. Table 1 shows that: (1) in 2006 and 2007 Delmarva's earned ROE was 2.5 and 1.5 points higher, respectively, than its authorized ROE,; (2) in 2008 and 2009 its earned ROE was 0.7 and 4.9 points lower, respectively, than its authorized ROE: and (3) in 2010 its earned ROE was only 1.8 points lower than its authorized ROE. This is not evidence of chronic under earning, but rather evidence of a short-term decline in earnings since 2009 -- a decline from which Delmarva appears to be recovering. In fact, if you remove the 2009 unadjusted results, in the last 4 out of 5 years the Company has earned, on average, more than its authorized rate of return on equity.

**Q. DOES WITNESS VONSTEUBEN OFFER ANY EVIDENCE THAT DELMARVA WILL NOT CONTINUE TO RECOVER FROM THE 2009 DECLINE?**

A. Yes. In Schedule WMV-17, Mr. VonSteuben compares Delmarva's revenue requirement earnings under the 10 percent ROE authorized by the Commission in Delmarva's most recent rate case, Dkt. No. 09-414, to his estimate of Delmarva's earnings during the rate effective period for that rate case. See Exhibit KRP-1, page 1 of 3. His estimate of Delmarva's earned ROE during the rate effective period is 8.05 – only 0.2 points less than Delmarva's earned ROE in 2010. He also presents in Schedule WMV-18 estimates of Delmarva's ROE for a fully projected rate effective period (12 months ending June 30, 2013) for this proceeding. See Exhibit KRP-1, page 3 of 3. He calculates an ROE for Delmarva of 7.07, assuming the initial revenue increase Delmarva is requesting in this proceeding. He concludes, for this proceeding, that during the rate effective period Delmarva will continue to under earn.

**Q. DO EITHER SCHEDULE WMV-17 OR SCHEDULE WMV-18 INCLUDED IN MR. VONSTEUBEN'S TESTIMONY IDENTIFY A POSSIBLE CAUSE OF DELMARVA'S UNDER EARNING DURING THE RATE EFFECTIVE PERIODS?**

A. Yes. Mr. VonSteuben testifies that the primary causes of the revenue deficiency during the 09-414 rate effective period were increases in plant in service ($67 million) and operation and maintenance expenses ($8.6 million). Comparison of Schedule WMV-18 with Schedule WMV-17 indicates that the primary causes of the Schedule WMV-18 under earning is a massive increase in plant in service ($184 million) and moderate

increases in operation & maintenance expense ($3.6 million) and a significant increase in depreciation expense ($6.9 million). His testimony, however, ignores the fact the proximate cause of under earning is always either an increase in costs relative to revenue or a decrease in revenue relative to costs. Delmarva has a distribution rate structure for most of its customer classes that incorporates both a fixed customer component and a variable volumetric component. This means that Delmarva's revenue are significantly dependent on the weather during a rate effective period. Mr. VonSteuben presents no evidence that either eliminates weather as a cause of the revenue deficiency or identifies weather's contribution to the under earning.

**Q. DOES DELMARVA PROVIDE ANY OTHER EVIDENCE THAT SHEDS LIGHT ON THE POSSIBLE CAUSES OF ITS RECENT EARNINGS HISTORY AND WHAT ITS EARNING PERFORMANCE IS LIKELY TO BE IN THE NEXT FEW YEARS?**

A. Yes, with regard to costs, but not with regard to revenue. Delmarva witness Gausman provides in his testimony Delmarva's historical and planned capital expenditures.[1] From 2006 through 2008 Delmarva's annual capital expenditures were fairly steady around $40 million per year. In 2009 capital expenditures increased by approximately $9 million to $50 million due mostly to an increase in load project expenditures. It is likely, but by no means demonstrated, that this increase contributed to Delmarva's 2009 decline in earnings reflected in Mr. VonSteuben's testimony. In 2010 capital expenditures remained at the $50 million level, but this time due to an increase in reliability project expenditures. At the time that Mr. Von Steuben prepared his Schedule

[1] Gausman at 5, line 4 to 8, line 7; Tables 3 and 4. See Exhibit KRP-2.

WMV-18, Delmarva forecasted a $5 million increase in capital expenditures in 2011 -- all of which was attributable to an increase in reliability project expenditures and a $20 million increase to a total of $74 million in 2012, most of which is attributable to an increase in reliability project expenditures. Thereafter, for the years 2013 through 2015 both total capital expenditures and reliability project expenditures are, respectively, steady around $75 million and $55 million. In 2016 Delmarva forecasts an increase in total capital expenditures of $86 million, all of which is attributable to load project expenditures.

**Q. WHAT IN YOUR OPINION ARE THE CAUSES OF DELMARVA'S UNDER EARNING?**

A. On the evidence presented by Delmarva, it is impossible to say. It is clear that the recent under earning in 2009 may have wholly or partially been the result of Delmarva's decision to significantly increase its load project expenditures. Distribution capital expenditures lead inexorably to: (1) increases in the cost of operating and maintaining the plant purchased; (2) increases in depreciation expense for the plant purchased; and (3) increases in rate base and, thus, revenue required for return. If there is little or no corresponding increase in revenues, or efficiencies gained by these capital expenditures, a utility will under earn -- all other things being equal. Without revenue data, which Delmarva has not provided, it is not possible to determine whether or how much Delmarva's revenue level contributed to the 2009 decline in earnings. For the future, Delmarva forecasts a $20 million increase in annual capital expenditures. Without a quantitative analysis regarding future revenue levels and efficiency gains, which Delmarva has not provided, neither I nor anyone else can conclude anything more than

that Delmarva's planned capital expenditures are a possible contributing cause of any future under earnings Delmarva may experience.

**Q. HOW DOES DELMARVA PROPOSE TO DEAL WITH THIS POTENTIAL PROBLEM OF CAPITAL EXPENDITURE INDUCED UNDER EARNING?**

A. Delmarva proposes to deal with this potential problem by implementing its proposed Reliability Investment Recovery Mechanism (RIM) which is one of several alternative regulation mechanisms recommended by Delmarva Witness Lowry.

**Q. WHAT ALTERNATIVE REGULATION MECHANISMS DOES DELMARVA WITNESS LOWRY PROPOSE?**

A. He recommends that the Commission "adopt a reliability investment recovery mechanism ("RIM") … sanction the use of fully forecasted test years in Delmarva's upcoming rates cases … [and] consider some form of a multi-year rate plan in conjunction with the RIM."[2]

**Q. DO YOU AGREE WITH MR. LOWRY'S RECOMMENDATION OF A FULLY FORECASTED TEST YEAR?**

A. No. As Mr. Lowry points out, the use of forecasted test years addresses under earning caused by: (1) cost inflation; (2) customer growth; and/or (3) capital additions during the rate effective period.[3] As I explained above, the evidence provided by Mr. VonSteuben's testimony does not demonstrate that Delmarva has experienced and/or will experience in the future capital expenditure induced attrition. Delmarva, however, has provided no evidence that Delmarva has experienced and/or will experience in the

[2] Lowry at 52, lines 14 to 17.
[3] Lowry at 27, line 23 to 28, line 2.

future under earning attrition induced by inflation and/or customer growth. The cause of Delmarva's purported under earning claimed by both Mr. Lowry and other Delmarva witnesses is post-test year capital expenditures. Mr. Lowry recommends the RIM as the solution to Delmarva's under earning. His recommendation of fully forecasted test years is both unsupported by any evidence and redundant with regard to his recommendation of the RIM. More importantly, however, fully forecasted test years violate the traditional regulatory model's fundamental principle that the costs and expenses for plant facilities are recovered from ratepayers during the period that ratepayers receive a benefit from the facilities i.e., only after the facilities used and useful in service. As I explain more fully in my discussion of Delmarva's RIM any alternative regulation mechanism that disturbs the traditional model's balance of interests and incentives should be subject to vigorous scrutiny with regard to need, effectiveness, ratepayer benefits balancing and offsetting the benefit that the mechanism confers on the utility. Neither Mr. Lowry nor any other Delmarva witness has provided evidentiary support for a fully forecasted test year.

**Q. DO YOU AGREE WITH MR. LOWRY'S RECOMMENDATION OF MULTI-YEAR RATE PLANS?**

A. No. As regards multi-year plans, Mr. Lowry asserts that together with appropriate under earnings relief mechanisms they are the best alternative regulation option because they eliminate the need for frequent rate cases.[4] Mr. Lowry has the causation reversed here. If a utility does not have an under earning problem, then there will be no need for

[4] Lowry at 25, line 17 to 26, line 15.

frequent rate cases and a multi-year rate plan would be appropriate. Mr. Lowry's recommendation is not a recommendation at all, but merely a prediction that the RIM will solve Delmarva's under earning problem and thus reduce the need for frequent rate cases. That said, frequent rate cases are also part of the traditional model's balancing of interests and incentives. From the utility's perspective, rate cases are its guard against under earning. From the ratepayers' perspective, rate cases are their guard against over earning by the utility. From the Commission's perspective, rate cases are the point where it exercises its regulatory oversight on the balance of interests and incentives. Any alternative regulatory mechanism that reduces the frequency of rate cases and thus disturbs the traditional model's balance should be subject to vigorous scrutiny with regard to need, effectiveness, ratepayer benefits balancing and offsetting the benefit that the mechanism confers on the utility. Neither Mr. Lowry nor any other Delmarva witness has provided evidentiary support for a multi-year rate plan.

**Q. WHY DOES WITNESS LOWRY HAVE TO SAY ABOUT THE DECOUPLING ALTERNATIVE REGULATION MECHANISM?**

A. Mr. Lowery characterizes decoupling as a means of mitigating the financial attrition or under earning that results from declining customer average volumetric consumption caused, for example, by conservation and/or demand side management programs. He distinguishes three different decoupling methods: (1) fixed-variable pricing; (2) true-up plans; and (3) lost revenue adjustment plans (LRAM).[5] He assesses the pros and cons of these methods as all three address under earning due to declining average consumption, but fixed-variable pricing and true-ups both deny the utility financial benefit from

[5] Lowry at 17, lines 3-10.

growth in average consumption. He also states emphatically that Delmarva is not "experiencing a *declining* trend in average use."[6] I conclude that of the three methods he would recommend the LRAM, but he is not recommending any decoupling method because decoupling does not address the capital expenditure induced under earning that he attributes to Delmarva.

**Q. WHY DOES WITNESS LOWRY RECOMMEND THAT THE COMMISSION APPROVE DELMARVA'S PROPOSED RIM?**

A. Mr. Lowry describes the general benefits of the RIM as its ability to mitigate under earnings caused by revenue growth lagging cost growth by expediting cost recovery of the costs that cause growth in rate base.[7] The specific benefits that he ascribes to the RIM are: (1) less frequent rate cases;[8] (2) streamlined regulation and improved utility performance;[9] (3) a reasonable cost for capital needed for investment;[10] (4) incentive for utility to make capital expenditures for reliability and safety improvements;[11] (5) utility management has more time to oversee reliability and customer service quality improvement;[12] and (6) regulators are freed to focus on other issues.[13]

**Q. WILL THE RIM AS PROPOSED BY DELMARVA DELIVER THE BENEFITS LISTED BY MR. LOWRY?**

A. No. Except for the third benefit listed by Mr. Lowry, the suggested benefits are ethereal. As discussed below, the process presented by the Delmarva witnesses amounts to a

[6] Lowry at 19, lines 13-14.
[7] Lowry at 31, line 19 to 32, line 2.
[8] Lowry at 37, line 8.
[9] Lowry at 37, lines 9-10.
[10] Lowry at 38, lines 5-
[11] Lowry at 38, lines 11-13.
[12] Lowry at 38, lines 16-18.
[13] Lowry at 38, line 18.

series of mini annual rate cases involving Delmarva's construction budget and its depreciation rates – an effort that will then be duplicated in a future base rate case. With regard to improved utility performance, Delmarva has made no demonstration that simply running reliability capital expenditures through the RIM will result in improved performance. There is certainly no streamlining of regulation as Mr. Lowry claims in his second benefit. Rather the process described increases on an on-going basis the Commission and its Staff's involvement in what is one of the primary responsibilities of Delmarva management – managing Delmarva's capital budget. The Commission and its Staff have the role of regulatory oversight of Delmarva, not the role of participation in Delmarva's management. Regarding the other alleged benefits, the process described does not free up Delmarva management or the Commission and its Staff to focus on reliability or other issues. Indeed, the RIM process would increase the focus and resources that will be devoted by Delmarva management, interested parties, and the Commission and its Staff to reliability and Delmarva's capital budgeting process. As regards Mr. Lowry's third benefit, alternative regulation mechanisms like the RIM lower the utility's risk of recovery of capital expenditures because they seek pre-approval of certain capital projects before they are used and useful, thereby shifting the regulatory balance in favor of the Company and significantly lowering its cost of capital.

**Q. IS DELMARVA PROPOSING TO IMPLEMENT THE OTHER ALTERNATIVE REGULATION MECHANISMS RECOMMENDED BY MR. LOWREY?**

A. I do not believe so. Mr. Lowry's testimony addresses what he refers to as "the four remedies for regulatory lag that are most widely used today: revenue decoupling, multi-

year revenue caps, targeted cost recovery mechanisms, and fully forecasted test years."[14] By "regulatory lag," Mr. Lowry means under earning.[15] He recommends that the Commission "adopt a reliability investment recovery mechanism ("RIM") … sanction the use of fully forecasted test years in Delmarva's upcoming rates cases … [and] consider some form of a multi-year rate plan in conjunction with the RIM."[16] In as much as none of the other Delmarva witnesses propose to use in this proceeding a multi-year rate plan or a fully forecasted test year nor provide any testimony or evidence in support of the appropriateness for Delmarva of a fully forecasted test year and/or multi-year rate plan in the future, I assume in my testimony that Delmarva is only proposing that the Commission decide this rate case within the traditional regulatory model and adopt on a going forward basis the RIM as variously described in the testimony of Delmarva witnesses Santacecilia, Gausman and Lowry.

## RELIABILITY INVESTMENT RECOVERY MECHANISM (RIM)

**Q. IN ESSENCE, WHAT IS THE RELIABILITY INVESTMENT RECOVERY MECHANISM (RIM) PROPOSED BY DELMARVA?**

A. Delmarva's proposed RIM is essentially a capital expenditure tracker - what Mr. Lowry refers to as a "targeted capital expenditure cost recovery mechanism."[17] Such mechanisms deal with post test year capital expenditures that are, therefore, not included base rate revenue requirement. Instead, these capital expenditures are dealt with in an

[14] Lowry at 16, lines 16-19.
[15] Lowry at 4, lines 16-19.
[16] Lowry at 52, lines 14 to 17.
[17] Lowry at 31, line 3-20.

on-going separate revenue requirement calculation that is billed to customers as a surcharge to base rates. Such trackers generally provide for periodically moving the accumulated investment into the base rate revenue requirement.[18]

**Q. CAN YOU BRIEFLY DESCRIBE THE REGULATORY STATUS OF TRACKERS?**

A. While trackers depart from the traditional regulatory model in very important ways which I discuss below, they are not new to the world of regulated utilities. A succinct summary of the regulatory pros and cons of trackers can be found in a recent paper from the National Regulatory Research Institute, which I have included as Exhibit KRP-3 to my testimony. In the past trackers have been instituted only under extraordinary circumstances which Commissions have noted in justifying departures from more traditional regulation. Examples of such extraordinary cost circumstances justifying a departure from the traditional model have been costs that: (1) are outside the control of a utility; (2) are unpredictable and volatile; or (3) are substantial and recurring. The classic example has been electric fuel costs in the latter part of the last century, which were substantial, unpredictable, volatile and beyond the control of electric utility management. The result was a proliferation of fuel adjustment charges in North American electric utilities. More recently capital expenditure trackers have been put forward and accepted in a number of jurisdictions for recovery of "infrastructure investments." Mr. Lowry includes an unreadable Figure 6 showing jurisdictions that have recently adopted capital expenditure trackers. The same figure is in his testimony in the District of Columbia on behalf of Pepco and is readable, and I have included it as

[18] Lowry at 47, lines 13-16.

Exhibit KRP-4 to my testimony. Generally speaking, Commissions have approved these trackers only after a showing that: (1) the tracker targets incremental investment; (2) the tracker is needed; (3) the tracker will address the identified need; and (4) the tracker represents a quantifiable benefit to ratepayers.

**Q. HAS DELMARVA MADE A SHOWING FOR ITS RIM PROPOSAL ON ANY OF THESE POINTS?**

A. No. Delmarva's RIM does not target incremental investment. To the contrary Delmarva proposes to run the bulk of its plant investment through the RIM. Delmarva has not shown that there is a need that the RIM addresses. Delmarva has not shown that the RIM would provide a quantifiable benefit to ratepayers.

**Q. WHAT ARE THE DETAILS OF DELMARVA'S PROPOSAL WITH REGARD TO THE RIM?**

A. Delmarva's description of its RIM proposal is scattered among the testimonies of Delmarva witnesses Lowry, Gausman and Santacecilia. The process for selection and approval of the projects that will be included in the RIM calculation is described in a haphazard manner in the testimonies of Mr. Lowry and Mr. Gausman and is more aspirational than detailed and severely lacking in important details I discuss below. The calculation of the RIM revenue requirement and its conversion into class specific surcharges is described in Mr. Lowry's testimony and set forth in detail in Ms. Santacecilia's Schedule MCS-5.[19] Page 1 of Schedule MCS-5 shows the calculation of the revenue requirement, which is done on a monthly basis: Rate Base is calculated using Plant in Service, Depreciation Reserve, and Deferred Taxes.; Earnings are

[19] See Exhibit KRP-5.

calculated using Book Depreciation expense and current and deferred taxes; Revenue Requirement is calculated by applying the proposed rate of return to Rate Base plus CWIP.[20] Page 2 of Schedule MCS-5 shows the distribution of the RIM revenue requirement to the customer classes on the basis of the base rate demand charge distribution. The RIM revenue requirements for the classes are then converted into surcharge amounts to be added to customers' base rate bills. For the RES, RSSH, RTOU-ND, GS-SH, GS-WH, ORL and OL classes, the revenue requirement is converted to a $/kwh charge; for the MGS-S, LGS-S and GS-P classes, the revenue requirement is converted into surcharge with both $/kw and $/kwh components. The surcharges are applied to customer bills beginning with the first month of an annual period. The rates are recalculated on an annual basis. Because the surcharges are applied prospectively, being calculated on budgeted rather than actual expenditures, the annual calculation includes a true-up reconciliation for billed versus actual costs.[21]

**Q. WHAT PROCESS DOES DELMARVA PROPOSE FOR SELECTION AND APPROVAL OF CAPITAL EXPENDITURES TO BE INCLUDED IN THE RIM?**

A. Delmarva's proposed process of selection of the capital expenditures to be included in the RIM is described by Delmarva witnesses Gausman and Lowry. The selection criteria are to be projects that do not produce additional revenue and improve the operation of the electric system. Table 7 of Mr. Gausman's testimony lists and defines

[20] Schedule MCS-5; Lowry at 47, line 19 to 48, line 5.
[21] Gausman at 24, lines 1-8.

the nine project categories that purportedly meet these criteria.[22] The selection of projects will be conducted in the course Delmarva's annual construction budgeting process which Delmarva undertakes to determine the level of funding and projects required to support the operation of distribution system.[23] The projects selected will be included in a RIM Plan listing the projects selected under each of the nine categories along with project specific information.[24] Delmarva proposes that the Commission establish an annual RIM process that will include Delmarva, Commission Staff and interested parties.[25] Staff and parties will be involved in the selection process.[26] Delmarva will file the RIM Plan annually in March[27] and quarterly updates during the year.[28] The annual filing will include an internal audit and the reconciliation mentioned earlier.[29] There will be an annual hearing on the RIM filing.[30]

**Q. WHAT PERCENTAGE OF DELMARVA'S TOTAL ANNUAL DISTRIBUTION CONSTRUCTION BUDGET WOULD RIM EXPENDITURES REPRESENT?**

A. Delmarva estimates that RIM Expenditures would represent approximately three quarters of Delmarva's annual distribution construction expenditures. Mr. Gausman's Schedule WMG-1 shows the budgeted RIM expenditures broken down by the nine RIM project categories he lists in his testimony Table 9. I compared these amounts to the

[22] See Exhibit KRP-6.
[23] Gausman at 18, lines 4-19.
[24] Gausman at 23, lines 5-10
[25] Gausman at 18, line 20 to 19, line 2.
[26] Gausman at 23, lines 11-16.
[27] Gausman at 21, line 12 to 23, line 2.
[28] Gausman at 23, lines 17-21.
[29] Lowry at 48, line 7 to 49, line 2.
[30] Lowry at 48 17-18.

total budgeted amounts for those years shown in his testimony Table 4. The results are shown in Exhibit KRP-7.

**Q. ARE THE EXPENDITURES SHOWN IN SCHEDULE WMG-1 INCREMENTAL?**

A. No. Approximately 25% of the projects are for normal replacement of facilities at the end of their service lives. Approximately 35% of the projects are facilities upgrade projects. In many cases upgrades of facilities are made at the time of normal replacement at the end of the facilities' service life and the upgrade represents only a relatively small part of the expenditure. These are conservative estimates. I analyzed the individual project listings for Delmarva's 2012-2016 distribution construction budget provided in discovery.[31] I counted only projects that were explicitly labeled either replacement or upgrade. It is very likely that some of the projects that are not labeled "replacement," nonetheless, involve some facilities replacement. Exhibit KRP-8 contains the results of my analysis.

**Q. IS THE INCLUSION OF NORMAL REPLACEMENT COSTS IN THE RIM A PROBLEM?**

Yes. First, normal replacement expenditures are made to <u>maintain</u> system reliability which a utility is required to do as a condition of its franchise. Placement of capital expenditure dollars in a tracker represents an incentive to the utility to expend those dollars. There is no justification for providing this additional incentive to do what the utility is already required by the terms of its franchise. Doing so disturbs the traditional model's balance of interests and incentives. If the incentive is provided than it must be

[31] Delmarva response to PSC-COS-6, Attachment B.

offset by a benefit to ratepayers. Second, normal replacement costs must be excluded from a capital expenditure tracker because the replacement cost is already being recovered in base rates. The need to identify and exclude normal replacement costs also represents a complication in implementation of a capital expenditure tracker because the method of identifying and quantifying the incremental portion of project costs has to agreed upon and adhered to, which adds another layer to project analysis review and selection.

**Q. ARE THERE OTHER PROBLEMS AND PROCESS COMPLICATIONS ASSOCIATED WITH THE SELECTION OF EXPENDITURES TO INCLUDE IN A TRACKER?**

Yes. Because a capital expenditure tracker confers a benefit to the utility it must be balanced by a benefit to ratepayers. This means that an essential part of the process for selecting capital expenditures for inclusion in the tracker must include a demonstration and quantification of the benefit to ratepayers. Selection must rest on a cost/benefit analysis from the ratepayers' perspective. A method or methods of cost/benefit analysis need to be agreed upon and adhered to, which adds yet another layer to project analysis, review and selection.

**Q. WHAT WOULD BE THE INVOLVEMENT OF THE COMMISSION, ITS STAFF, AND INTERESTED PARTIES IN THIS PROCESS?**

A. Delmarva envisions extensive involvement. Beginning with Delmarva's request that the Commission design the details of the proposal via a collaborative workshop. Mr. Gausman describes Staff and parties as providing input and guidance regarding the RIM

projects and insight regarding the relative importance of projects.[32] This would presumably involve an independent review and assessment of the projects as they are selected in the Delmarva budget process. This would not be a simple process. I've just described three levels of review that would be required. In addition, the number of projects that would need to be reviewed is large. My count of the number of projects with budgeted capital dollar expenditures in the detailed listing provided by Delmarva in discovery, found that in Delmarva's 2012-2016 capital budget there are over one hundred projects that would have to be reviewed annually.[33] Mr. Lowry indicates that there would be an annual proceeding to consider the annual RIM filing,[34] which given the importance of the information contained in the annual filing and its direct impact on customer rates would surely have to be evidentiary in nature, with the Commission issuing an order either approving or disallowing the plan. In addition, as Mr. Lowry points out in his testimony, all these projects would be subject to a second review as to reasonableness in the next general rate case.[35]

**Q. WHAT IS YOUR ASSESSMENT OF THE DELMARVA'S PROPOSAL?**

A. First and foremost, aside from the method of calculating the RIM surcharge, it is not a proposal presented in sufficient detail for the Commission, Staff and the interested parties, to assess on its merits. Rather it is a series of aspirations -- that Staff and interested parties will provide meaningful input, that the selection process will actually select appropriate projects, and that the capital expenditures will receive the same level

[32] Gausman at 24, line 19 to 25, line7.
[33] See Exhibit KRP-8.
[34] Lowry at 50, lines 4-6 and at 36 , lines 7-20.
[35] Lowry at 50, lines 6-11.

of rigorous scrutiny they would in a rate case. For this reason alone the Commission should reject this proposal. In addition, revenue requirement trackers like the RIM are essentially formula rates which depart significantly from the traditional regulatory model and should be, in the first instance, subject to rigorous scrutiny with extensive supporting analysis in a separate proceeding.

**Q. IN WHAT WAY DO TRACKERS DEPART FROM THE TRADITIONAL REGULATORY MODEL?**

A. As I explained earlier, trackers disturb the traditional model's balance of interests and incentives between the utility and its ratepayers. As I indicated earlier, in the traditional model regulatory lag is an incentive for the utility to pursue the efficiency and productivity improvements. To the extent that a tracker reduces regulatory lag, it reduces that incentive. Capital expenditure trackers also reduce a utility's risk in the investments recovered through the tracker. That is why a very significant issue in consideration of a tracker is the rate of return used in the tracker, which should reflect the reduced risk of recovery. An integral part of the balance in the traditional model is timing of recovery – cost recovery from rate payers begins only after plant is in service and used and useful, which is an incentive to the utility to be prudent in its expenditures. The RIM as proposed by Delmarva allows recovery from ratepayers to begin before the investment is in service. It has a retrospective true-up which guarantees the authorized return on investment. Any proposal to institute a capital cost expenditure tracker must be accompanied by an analysis of the ways in which it will impact the traditional model's balance of interests and incentives, and a demonstration of how it will redress any alteration to that balance. For example, where investment risk is reduced and the

utility's cost of capital is thereby lowered, how will that cost saving will be passed back to ratepayers? As proposed these are generic disturbances of the traditional model. Delmarva's proposed RIM's reliance on forecast expenditures with a retrospective true-up for actual expenditures, rather than actual historical expenditures, contorts the regulatory framework because the company loses all bottom line incentive to be prudent and efficient in its capital spending and is virtually guaranteed the authorized return on its investment rather than the traditional model's guarantee of only the opportunity to earn its authorized reasonable return on that investment.

**Q. WHAT CRITICAL DETAILS ARE MISSING FROM DELMARVA'S PROPOSAL?**

A. Delmarva's proposal is missing many key elements:

- Specification and quantification of the net ratepayer benefits that will be achieved by the RIM proposal.
- Demonstration that the RIM will eliminate or greatly reduce future under earning.
- Specification of the cost-benefit and value of service analyses and metrics that will be used to select eligible RIM projects.
- Specification of the criteria to be used to distinguish reliability improvement projects from normal replacement projects.
- Specification of the metrics that will be used to measure RIM performance.
- Specification of the ratepayer offset to Delmarva reduced risk and any other changes to the traditional model's balance of interests and incentives.
- A demonstration the RIM selected programs will improve reliability.
- Specification of the accounting that will be employed, particularly with

regard to any regulatory liabilities that may result from the RIM's operation.

- Specification of a timetable for moving the capital expenditures into rate base.

- A demonstration that Delmarva consistently meets the forecast expenditures that its budget process produces or specification of the steps it will take to ensure that actual expenditures do match forecast expenditures

**Q. DO YOU KNOW OF ANY INSTANCES WHERE REGULATORS HAVE REJECTED A PROPOSED CAPITAL EXPENDITURE TRACKER FOR FAILURE TO MEET ANY OF THE SPECIFICATIONS YOU JUST LISTED?**

A. Yes. The Illinois Commerce Commission refused a capital expenditure tracker proposed by People's Gas Company for failure to quantify customer benefits.[36] The Public Utilities Commission of Rhode Island rejected a capital expenditure tracker proposed by Narragansett Electric Company on the basis that there was insufficient evidence to support the proposal and no evidence that a tracker was needed.[37] The Massachusetts Department of Public Utilities rejected a Western Massachusetts Electric Company proposed reliability capital expenditure tracker for, among other reasons, failure demonstrate that it would have a significant effect on the company's reliability metrics or overall reliability.[38] The Department's order in that case is worth noting.

> One of the Department's objectives in establishing a decoupling mechanism is to better align distribution

[36] The Peoples Gas Light and Coke Company, Illinois Commerce Commission, Docket No. 07-0241 and 07-0242, Order dated February 5, 2008, page 162.
[37] Narragansett Electric Company, Rhode Island Public Utilities Commission, Docket No. 4065, Order issued April 14, 2010, pages 15-16.
[38] Western Massachusetts Electric Company, DPU 10-70, Order dated January 31, 2011, page 48-50.

> companies' revenues with their costs. The Department typically considers reconciling tariffs such as the CRRC [reliability tracker] under circumstances in which a company's operating costs are under pressure due to significant volatility as a result of circumstances outside its control such as fuel costs. Therefore, as the Department examines the Company's CRRC we must give careful consideration to the formation of any new fully reconciling cost mechanism. The Department must closely examine how each mechanism achieves its intended goals and how the implementation of each mechanism impacts rates and a company's financial well being before considering the adoption of reconciling mechanisms. Specific criteria the Department considers when determining whether to allow a new fully reconciling mechanism include whether the costs at issue are: (1) volatile in nature; (2) large in magnitude; (3) neutral to fluctuations in sales; and (4) beyond the company's control. The Department has previously allowed reconciling tariffs such as the CRRC in cases in which a distribution company has adequately demonstrated the need to recover between rate cases incremental costs associated with Department-approved capital expenditure programs.[39]

**Q. IS DELMARVA'S RIM PROPOSAL FATALLY FLAWED?**

A. I consider the absence of any of the items I specified above to constitute a fatal flaw in that in the absence of any of them it is simply impossible to consider the proposal on its merits. Particularly egregious, however, are the proposal's use of forecast rather than actual expenditures, the proposal's failure to exclude normal replacements and the proposal's failure to provide any customer benefits offsetting the benefits provided the company.

**Q. WHAT IS YOUR RECOMMENDATION WITH REGARD TO THE RIM PROPOSAL?**

A. I recommend that the Commission reject Delmarva's proposal as insufficient and that at

[39] Western Massachusetts Electric Company, DPU 10-70, Order dated January 31, 2011, page 47-48.

such time that Delmarva's chooses to submit a complete proposal including all the items I listed above the Commission set a separate regulatory docket in which to consider the proposal.

## JURISDICTIONAL AND CLASS COST OF SERVICE STUDIES

**Q. WHY DOES DELMARVA PERFORM A JURISDICTIONAL ALLOCATION STUDY?**

A. Delmarva operates its facilities as a single system that as a matter of geography and law encompasses more than one regulatory jurisdiction. Accordingly, Delmarva recovers the costs of its system in rates established by this Commission, the Maryland Public Service Commission and the Federal Energy Regulatory Commission (FERC). Delmarva's transmission facilities fall under the regulatory jurisdiction of the FERC and, although owned by Delmarva, are under the control of PJM Interconnection, L.L.C., a FERC-certified Regional Transmission Organization (RTO) and Independent System Operator (ISO), per the FERC's rules, regulations and orders. Delmarva's transmission service revenue requirement is recovered through rates set forth in PJM's Open Access Transmission Tariff filed with the FERC. The remainder of Delmarva's system, its distribution system, falls under the regulatory authority of this Commission and the Maryland Public Service Commission and the costs of Delmarva's distribution system must be allocated between those jurisdictions. To determine the cost of the portion of its distribution system used to serve customers in its Delaware jurisdiction and to develop its revenue requirement for that service, Delmarva performs a jurisdictional allocation study.

**Q. HOW DOES DELMARVA DETERMINE THE COSTS OF SERVING ITS DELAWARE CUSTOMERS?**

A. Delmarva performs a jurisdictional allocation study wherein it either (1) directly assigns to the Delaware jurisdiction the accounting costs for those distribution facilities that are used exclusively in providing distribution service to customers in Delaware or (2) allocates to the Delaware jurisdiction a portion of the costs of its distribution facilities that are used in common to provide service to customers in both Delaware and in Maryland. "Direct assignment" and "allocation" are terms of art and the appropriate processes and procedures for both direct assignment and allocation of facilities and costs are set forth in the "Electric Utility Cost Allocation Manual" of the National Association of Regulatory Utility Commissioners (NARUC).

Delmarva takes the standard approach of separating, directly assigning, its system-wide distribution plant costs and expenses by FERC account and then allocating general plant and general and administrative expenses to the distribution function.[40] Separated system-wide distribution costs and expenses are then either directly assigned or allocated to the Delaware jurisdiction.[41] The results of this two-step process are shown on Schedule WMV S-1,[42] summarized in rate base and earnings items in columns (4) and (5).[43] The separated total system distribution costs and expenses are in column (4); the Delaware jurisdiction distribution costs and expenses are in column (5).

[40] VonSteuben at 9, lines 2-15.
[41] VonSteuben at 8, lines 14-15.
[42] See Exhibit KRP-9
[43] 12+0 Update, Schedule WMV S-1, page 1.

**Q. WHAT USES DOES DELMARVA MAKE OF THE JURISDICTIONAL DISTRIBUTION COST STUDY?**

A. There are two. First, the cost study is used to develop Delmarva's proposed revenue requirement. Delmarva uses the total rate base and earnings items on lines 16 and 35 of column (5) to develop its Delaware distribution revenue requirement, by first applying various adjustments to those two items[44] and then applying to the adjusted rate base and earnings items its requested rate of return and tax revenue conversion factor.[45] Second, the cost study is the basis of the class cost of service study, which is used for rate design purposes. In its application Delmarva used a jurisdictional study based on six months actual and six months forecast data for a test year ending 12/31/11[46] for both its revenue requirement calculation[47] and its class cost of service study.[48] Delmarva has since updated the jurisdictional cost study and the revenue requirement to 12 months actual data ending 12/31/11, but not the class cost of service study.

**Q. HAVE YOU REVIEWED THE UPDATED JURISDICTIONAL COST STUDY AND DO YOU HAVE ANY CRITICISMS OF IT?**

A. Yes, I have reviewed the updated study.[49] I reviewed the study's: (1) separation by FERC account of distribution costs and expenses; (2) functionalization and allocation of general plant and administrative and general expenses to distribution; and (3) direct

[44] 12+0 Update, Schedule WMV S-1, page 2.
[45] 12+0 Update, Schedule WMV S-2.
[46] VonSteuben at 4, lines 18-22 and Schedule WMV-1, page 1.
[47] VonSteuben Schedule WMV-1, page 2 and Schedule WMV-2.
[48] Tanos Schedule EPT-1.
[49] 12+0 Update, workpapers COS #1 - #12.

assignments and allocations of distribution costs and expenses to the Delaware jurisdiction. I have no criticisms of Delmarva's jurisdictional cost study.

**Q. WHY DOES DELMARVA PERFORM A CLASS COST OF SERVICE STUDY?**

A. As I indicated earlier, Delmarva uses the class cost of service study in its rate design. Specifically, the study's class rate of return results are used, first, to distribute the revenue requirement to the customer classes and, then, to calculate the tariff rate elements for the individual customer classes. The study's class customer and demand costs are also used in the calculation of the tariff rate elements.

**Q. DOES THE FACT THAT DELMARVA DID NOT UPDATE THE CLASS COST OF SERVICE STUDY FOR TWELVE MONTHS ACTUAL DATA REPRESENT A SIGNIFCANT FLAW IN THE STUDY?**

A. It is a significant design flaw in the study. The results of the study are used in rate design in conjunction with the revenue and cost data from 12+0 Update. The various data used in rate design should all be from the same period, so the cost study should be updated to 12+0. In the final analysis, however, the class cost of service study measures the cost structure of each class rather than the absolute level of costs. Only in the case where forecast versus actual showed a significant shift in the cost structure would it be absolutely necessary to update the class cost study. In this case the actual data does not indicate a significant change in the cost structure. So the failure to update is not a significant flaw. On the other hand, I have examined the cost study in electronic format and determined that updating it would be a relatively simple task. It is not the case that

Delmarva avoids a significant expenditure of resources by not updating the class cost study and so Delmarva should in the future update the cost of service study as well.

**Q. HAVE YOU REVIEWED THE CLASS COST OF SERVICE STUDY?**

A. Yes. The class cost study is described by Delmarva Witness Tanos[50] and presented in Mr. Tanos' Schedules EPT-1 through EPT-4. I have included those schedules in Exhibit KRP-10. In discovery I requested and was provided the study in its electronic format and the analyses underlying the allocators used in the study as well as explanations of the allocators used in the study. The fundamental principle underlying class cost studies is that the direct assignment and allocation of costs to the various customer classes should reflect the cost-causative impact of each class on the distribution system. I reviewed the study and found that, with one exception, the assignments and allocations properly reflect class cost causation. There are refinements that can and should be made to improve the study's accuracy. These improvements are, in fact, discussed by Mr. Tanos in his testimony concerning the Order 8011 workshop, where he indicates that these refinements will be implemented in subsequent studies.[51]

**Q. WHAT IS THE ONE EXCEPTION TO WHICH YOU REFERRED?**

A. The exception is the way in which Delmarva allocates underground versus overhead facilities.

**Q. WHAT IS THE ISSUE WITH REGARD TO UNDERGROUND AND OVERHEAD FACILITIES?**

A. Delmarva uses the same demand allocator for both underground and overhead facilities,

[50] Tanos at 4, line12 to 8, line 14; at 9, line 13 to 14,line 2.
[51] Tanos at 8, line 17 to 9, line11.

but these facilities have significantly different cost characteristics and typically are used in different proportions by residential and commercial customers. Because commercial customers generally make greater use of underground facilities, and because underground facilities are significantly more costly than overhead facilities, use of the same allocator over allocates costs to the residential classes and under allocates costs to commercial classes. This is of concern because over allocation of costs to a class produces an understatement of class return, while under allocation produces an overstatement of class return. Delmarva uses class rates of return as the basis to distribute its revenue requirement. If the rate of return of a class is understated, the revenue requirement distribution will overstate that class's cost contribution and the rates for that class will recover from the class more than its share of the costs.

**Q. ARE YOU ABLE TO DEVELOP APPROPRIATE UNDERGROUND AND OVERHEAD FACILITIES ALLOCOTRS?**

A. No. The information required to do so was not in the data provided by Delmarva. It would not be difficult for Delmarva to develop separate allocators using its property records. The Public Service Commission of the District of Columbia directed Delmarva's sister subsidiary, Pepco, to provide information and data that allowed me to determine that Pepco's single allocator over allocates underground costs to residential customers. I recommend that the Commission direct Delmarva to develop separate underground and overhead allocators for future class cost studies as an additional refinement within the Order No. 8011 framework and that, in evaluating the revenue requirement distribution in this case, the Commission note that it is likely that rates of return calculated for the residential classes are understated.

## REVENUE REQUIREMENT DISTRIBUTION AND RATE DESIGN

**Q. WHAT ARE DELMARVA'S REVENUE REQUIREMENT DISTRIBUTION AND RATE DESIGN PROPOSALS?**

A. Delmarva's revenue requirement distribution and rate design proposals are presented by Delmarva witness Santacecilia in her Schedules MCS-1 through MCS-4. I have included those schedules in Exhibit KRP-11. Ms. Santacecilia correctly states that the goal of rate design is to accurately reflect costs and to that end she used the Unitized Rate of Return (UROR) approach, whereby the revenue requirement is distributed to the customer classes so as to produce the same rate of return for each class.[52] Because in this case the unadjusted UROR would result in significant shifts in the allocation of revenue requirements and have large inter-class rate impacts, she proposes to limit the revenue shift to 1.5 times the overall revenue requirement increase percentage.[53] As regards actual rate design, she proposes to eliminate the energy or volumetric component of the MGS rate structure, and to move the customer components of all class rate structures towards full recovery of customer costs as calculated in the class cost study, but only so far as not to increase any customer charge more than 50 percent.[54] Ms. Santacecilia also presents rates which she says are based on the Modified Fixed Variable (MFV) rate design as developed to date in the Commission directed workshops.[55] She proposes that those rates be implemented effective January 1, 2013.

[52] Santacecilia at 3, line 14 to 4, line 7.
[53] Santacecilia at 4, lines 8-19; Schedule MCS-1.
[54] Santacecilia at 5, line 16 to 6, line 11; Schedules MCS-2 and MCS-3.
[55] Santacecilia at 7, line 20 to 8, line 5; Schedule MCS-4

As regards the RIM, as I indicated above, Ms. Santacecilia proposes a RIM revenue requirement distribution and surcharge rate structure and calculates it in a manner consistent with the demand and/or volumetric components of the proposed base rate structures.[56]

**Q. WHAT IS YOUR ASSESSMENT OF DELMARVA'S PROPOSALS?**

A. In the final analysis, proper rate design, by which I mean both the rate structure and revenue requirement distribution, is a matter of policy that seeks a fair balance of the interests and incentives of the utility and its ratepayers. In practical terms, this means for the utility that overall the rate structure must be sufficiently reflective of actual cost causation to provide it with a reasonable opportunity to earn what has been determined by the Commission to be a fair return on its investment. Thus, the first question is whether the rate design is based on an accurate assessment of cost causation on the utility's distribution system. Assessed from this standpoint, the proposed rate design fails with regard to rate structure, because for more than half of the customer classes there is no component for demand, which is a major driver of distribution facilities costs. [57] Instead, there is a volumetric component which is not a driver of distribution facilities costs. As a consequence, Delmarva's service rates do not reflect the costs incurred in providing service. From the ratepayer's perspective, the issue is the same but much narrower and more specific, posing the question --not to the rate structure overall -- but to its discreet pieces. Does the rate design for the individual ratepayer's class of service accurately reflect the value of the service consumed by the ratepayer as determined by

[56] Santacecilia at 10, lines 4-18.
[57] NARUC Manual at 89.

the Commission's rate design policies? The answer in the first instance is the same -- the proposed rate structure fails -- in this case for three reasons. First, for more than half of the customer classes there is no component for demand, which is a significant component of the individual ratepayer's consumption of distribution service. Second, the proposed rate design fails with regard to revenue requirement distribution to the classes because the class cost study's flawed underground and overhead allocations call into question the overall class rates of return. Third, the flaw in the cost study's allocation of underground and overhead facilities calls into question the class customer and demand costs that underlie the proposed rate component charges.

**Q. WHAT IS YOUR RECOMMENDATION REGARDING REVENUE REQUIREMENT DISTRIBUTION?**

A. Given the flaw in the allocation of underground and overhead facilities to the classes, and the possibility that the class cost study understates the residential class rate of return, it is an exercise in specious precision to use the UROR to distribute the revenue requirement. Moreover, there is no theoretical economic requirement that all classes produce the same rate of return, which is the underlying assumption of the UROR procedure. In unregulated companies, individual products and lines of business do not produce exactly the same return. The Commission should reject Delmarva's proposed revenue requirement distribution. It is in the distribution of the revenue requirement that the Commission implements policy decisions with regard to rate impacts on specific customer classes. The existing class revenue requirement distribution among the classes reflects past Commission policy decisions in this regard. Delmarva's UROR proposal places 72% of the proposed revenue requirement on the residential class compared to its

current revenue distribution of 60%. I recommend that any revenue requirement increase or decrease resulting from this case be distributed to the classes based on the current revenue distribution.

**Q. WHAT IS YOUR RECOMMENDATION REGARDING RATE STRUCTURE?**

A. Design and implementation of a customer/demand charge rate structure for a distribution system requires (1) full deployment of AMI on Delmarva's distribution system so that individual customers demand can be measured for both rate design and billing purposes, (2) at least a full year's worth of Delmarva's customer demand data with which to design the class specific rate structures and charges, and (3) integration of the AMI demand data with Delmarva's billing system. It is my understanding that Delmarva intends to complete deployment and testing of AMI on its distribution system this year. That would mean that the earliest Delmarva could actually implement a rate structure would be sometime in 2014. Therefore I recommend that the Commission accept Delmarva's proposed rate structure. I also, however, recommend, that the Commission reject Delmarva's proposal with regard to moving to full recover of the costumer costs in the customer component charge. The overhead/underground allocation flaw in the cost of service study also calls into question the study's calculation of full customer costs. It is likely that these costs are overstated in the case of the residential class. In addition, Delmarva's proposed increase in the customer charge disproportionately impacts low volume residential ratepayers,[58] producing a 50% increase at 0kW consumption and a 10% increase at 300kW with no discernible purpose – it sends no actionable economic signal and has

[58] Schedule MCS-3, page 3, Annual Average Billing Comparison Residential Service.

no impact on Delmarva's recovery. Moreover, increasing the customer charge decreases the volumetric charge and thereby sends the wrong energy consumption signal. I recommend that the Commission direct Delmarva to maintain the current rate relationship between the customer and volumetric charges.

**Q. WHAT IS YOUR ASSESSMENT OF THE EXAMPLE MODIFIED FIXED VARIABLE (MFV) RATE DESIGN IN MS. SANTACECILIA'S SCHEDULE MCS-4?**

A. It incorporates the same flaws with regard to the revenue distribution and customer charge that identified earlier. It does not incorporate the final refinements to which Ms. Santacecilia refers. It is a very simplistic example of a customer charge/ demand charge rate structure, in that it calculates the class distribution demand charge (DDC) by simply dividing the class demand revenue requirement by the class peak load contribution (Transmission PLC).

**Q. WHAT IS YOUR RECOMMENDATION REGARDING DELMARVA'S PROPOSAL TO IMPLEMENT THE FINAL MFV RATE STRUCTURE EFFECTIVE JANUARY 1, 2013?**

A. I recommend that the Commission reject that proposal. As I explained above it is clear that as of January 1, 2013 the prerequisites of design and implementation viz., one year's worth of demand data for all customers and integration of the demand data into Delmarva's billing system, will not be satisfied.

**Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

A. Yes.